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DR   P-PSDB; AAU17038.
XX
PT   Novel polypeptides and polynucleotides useful as diagnostic reagents to
PT   diagnose diseases or disorders associated with aberrant expression or
PT   activity of polypeptides, for treating blood clotting disorder,
PT   haemophilia -
XX
PS   Claim 1; SEQ ID NO 135; 601pp; English.
XX
CC   The invention relates to isolated nucleic acid molecules and their
CC   encoded secreted proteins. The nucleic acids and proteins are used to
CC   prevent, treat or ameliorate a medical condition in e.g. humans, mice,
CC   rabbits, goats, horses, cats, dogs, chickens or sheep. They
CC   are also used in diagnosing a pathological condition or susceptibility
CC   to a pathological condition. Antibodies to the proteins can also
CC   be used in alleviating symptoms associated with the disorders and in
CC   diagnostic immunoassays e.g. radioimmunoassays or enzyme linked
CC   immunosorbent assays (ELISA). Disorders which are diagnosed or treated
CC   include autoimmune diseases e.g. rheumatoid arthritis,
CC   hyperproliferative disorders e.g. neoplasms of the breast or liver,
CC   cardiovascular disorders e.g. cardiac arrest, cerebrovascular disorders
CC   e.g. cerebral ischaemia, angiogenesis, nervous system disorders e.g.
CC   Alzheimer's disease, infections caused by bacteria, viruses and fungi
CC   and ocular disorders e.g. corneal infection, and many other
CC   disorders listed in the specification. The polypeptides can also
CC   be used to aid wound healing and epithelial cell proliferation, to
CC   prevent skin aging due to sunburn, to maintain organs before
CC   transplantation, for supporting cell culture of primary tissues, to
CC   regenerate tissues and in chemotaxis. The polypeptides can also be used
CC   as a food additive or preservative to increase or decrease storage
CC   capabilities, fat content, lipid, protein, carbohydrate, vitamins,
CC   minerals, cofactors and other nutritional components. The present
```

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RESULT 11
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ID   AAA61698 standard; cDNA; 1232 BP.
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DT   23-OCT-2000  (first entry)
XX
DE   cDNA encoding human serine protease BSSP4 (hBSSP4) SEQ ID NO:7.
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KW   BSSP4; serine protease; human; hBSSP4; mouse; mBSSP4; brain;
KW   diagnostic marker; antibody; transgenic animal; Alzheimer's disease;
KW   oedema; dropsy; cancer; inflammation; prostate; testis; bone; ss.
XX
OS   Homo sapiens.
XX
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PN   WO200031277-A1.
XX
PD   02-JUN-2000.
XX
PF   19-NOV-1999;      99WO-JP06472.
PR   20-NOV-1998;      98JP-0347813.
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PA   (FUSO ) FUSO PHARM IND LTD.
XX
PI   Uemura H, Okui A, Kominami K, Yamaguchi N, Mitsui S;
XX
DR   WPI; 2000-400084/34.
DR   P-PSDB; AAB11703.
XX
PT   Serine protease BSSP4 and antibodies recognizing BSSP4 for assay and
PT   diagnosis of diseases in which BSSP4 expression is altered -
PS   Claim 8; Page 75-76; 111pp; Japanese.
XX
CC   The invention relates to novel serine proteases designated BSSP4
CC   (AAB11700-B11709), and to nucleic acids encoding them (AAA61695-A61704,
CC   AAA61799). The invention also relates to vectors and transformants
CC   comprising BSSP4 nucleic acids; transgenic animals in which the
CC   expression level of BSSP4 can be varied; and an mBSSP4 knockout mouse.
CC   The invention additionally encompasses anti-BSSP4 antibodies and methods
CC   of production of such antibodies, methods of BSSP4 detection using the
CC   antibodies, and the use of BSSP4, proteins or fragments as diagnostic
CC   markers for certain medical conditions. Nucleotides encoding BSSP4 were
CC   initially isolated in a human brain cDNA library using degenerate PCR
CC   primers (AAA61714-A61715) based on conserved regions of serine
CC   proteases. The BSSP4 serine proteases and nucleotides encoding them are
CC   useful in detecting homologues, mutants and polymorphic variants in
CC   biological samples (e.g. blood, urine, brain, prostate gland and testis)
CC   as diagnostic markers for diseases associated with altered BSSP4
CC   expression levels. Such diseases include Alzheimer's disease, oedema
CC   (dropsy), cancer or inflammation of brain, prostate, testis or bone.
CC   Sequences AAA61695-A61703 ans AAA61799 represent cDNAs encoding human
CC   BSSP4 variants (hBSSP4), and sequence AAA61704 represents cDNA encoding
CC   murine BSSP4 (mBSSP4).
XX
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Query Match      84.0%;   Score 1158;   DB 21;   Length 1232;
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Matches 1230;   Conservative   0;   Mismatches   0;   Indels  52;   Gaps   2;

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DE   cDNA encoding human serine protease BSSP4 (hBSSP4) SEQ ID NO:3.

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  AUTHORS   Wong,G.W., Yasuda,S., Madhusudhan,M.S., Li,L., Yang,Y.,
            Krilis,S.A., Sali,A. and Stevens,R.L.
  TITLE     Human Tryptase epsilon (PRSS22), a New Member of the Chromosome
            16p13.3 Family of Human Serine Proteases Expressed in Airway
            Epithelial Cells
  JOURNAL   J. Biol. Chem. 276 (52), 49169-49182 (2001)
  PUBMED    11602603
REFERENCE   2 (bases 1 to 1332)
  AUTHORS   Wong,G.W.
  TITLE     Direct Submission
  JOURNAL   Submitted (14-NOV-2000) Rheumatology, Immunology and Allergy,
            Brigham and Women's Hospital, Harvard Medical School, 1 Jimmy Fund
            Way, Boston, MA 02115, USA
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ORIGIN
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Query Match

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Qy   816 tgctggcggcatcatcagctggggcgagggcctgtgtccgagcgcaacc    875
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Db   781 tgctggcggcatcatcagctggggcgaggcgctgtgtccgagcgcaacc    840

Qy   876 acatcagacctctctgcgcaccgctctgggtgtggaagaatcgtgaaggg    935
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Db   841 acatcagacctctctgcgcaccgctcctgggtgtggaagaatcgtgca     900

Qy   936 gcgggcgcgctcaaggtgggccctccaggcgcacgagcgccggccgggggtct    995
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Qy   996 cggcgctcctagggcgcagcgcgggcagcggggatctcgaaaggcgccac    1055
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Db   961 cgcggctcctagggcgcacggacgcgggaggtctggggatcgaaaggcgccacat    1020

Qy  1056 ctggatctgatctgcggcgcggcctcggggggttccccgccgtaaataggc    1115
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Qy  1116 ctctacctctgggcgccggaggcgtctgcggaaggaaacccccccgacc    1175
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Qy  1176 gacgcgcctcaggcgcc-cctccaaggcgcatcaggcccctcagtgtcccgc    1234
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Qy  1235 cccgacgacttccggcacccggcccccgggccacgctttgtgtatataatg    1294
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Qy  1295 atttttatagttgtattgtaaccctgtcccacatatcttattttcccacaa    1354
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Qy  1355 attattattattctc    1367
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Db  1320 attattattctc    1332
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RESULT 3

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LOCUS       AB010779     1306 bp    mRNA    linear   PRI 17-MAY-2001
DEFINITION  Homo sapiens hBSSP-4 mRNA for brain-specific serine protease-4,
            complete cds.
ACCESSION   AB010779
VERSION     AB010779.1  GI:12248750
KEYWORDS    .
SOURCE      Homo sapiens brain cDNA to mRNA.
ORGANISM    Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
```

```
REFERENCE   1 (sites)
AUTHORS     Mitsui,S., Okui,A., Kominami,K. and Yamaguchi,N.
TITLE       Cloning and characterization of a human brain-specific serine
            protease, hBSSP-4
JOURNAL     Unpublished
REFERENCE   2 (bases 1 to 1306)
AUTHORS     Yamaguchi,N. and Mitsui,S.
TITLE       Direct Submission
JOURNAL     Submitted (27-JAN-1998) Nozomi Yamaguchi, Institute for Geriatrics,
            Kyoto Prefectural University of Medicine, Department of Cell
            Biology; Kajii-cho 465, Kamigyo-ku, Kawaramati Hirokoji, Kyoto,
            Kyoto 602-8566, Japan (E-mail:nozomi@koto.kpu-m.ac.jp,
            Tel:81-75-251-5848(ex.5848), Fax:81-75-251-5848)
FEATURES             Location/Qualifiers
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                     /tissue_type="brain"
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                     /gene="hBSSP-4"
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                     /db_xref="GI:12248751"
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                     QQLNRVVGGEDSTDSEWPWIVSIQKNGTHHCAGSLLTSRWVITAAHCFKDNLKPYLF
                     SVLLGAWQLGNPGSRSQKVGVAWVEPHPVISWKEGACADIALVRLERSIQFSERVLPI
                     CLPDASIHLPNTHCWISGWGSIQDGVPLPHPQTLQKLKVPIIDSEVCSHLYWRGAGQ
                     GPITEDMLCAGYLEGERDACLGDSSGPLMCQVDGAWLLAGIISWGEGCAERNRPGVYI
                     SLSAHRSWVEKIVQGVQLRGRAQGGALRAPSQGSGAAARS"
BASE COUNT       219 a    432 c    402 g    253 t
ORIGIN
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Query Match         93.1%;  Score 1283;  DB 9;  Length 1306;
Best Local Similarity   99.8%;  Pred. No. 4.6e-228;
Matches 1305;  Conservative    0;  Mismatches    0;  Indels    2;  Gaps    2
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Qy   50 gccatggtgttctggagagcgcccccacccccagccccctggttggggggctgtctcggcaccttcacc 109
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Db    1 GCCATGGTGGTGTTCTGGAGCGCCCCCAGCCCCTGGTGGGGGCTGTGTCTCGGCACCTTCACC 60

Qy  110 tccctgctgctgctggccagccatctcaatgcggcggggccagggtaccgtgttccccca 169
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   61 TCCCTGCTGCTGCTGGCCGTCGACAGCCATCTCAATGCGGCCGGGATACCTTGTTCCCCCA 120

Qy  170 gcctgtgggagccccccagcagctgaaccgggtcttgtgggcgggcggggacactgacagc 229
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Db  121 GCCTGTGGGAGAGCCCCAGCCAGCGTTGTGTGGGCGGGCGGGGACAGCACTGACAGC 180

Qy  230 gagtggccctggatcgtgagcatccagaagaatgggaccccacccactgcgcaggttcctg 289
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Db  181 GAGTGGCCCTGGATCGTGAGCATCCAGAAGAATGGGACCCACACTGCGCAGGTTCTCTG 240

Qy  290 ctcaccagccgcgctgggtggtgatcactgtgtcgcccactgttgttcaaggacaacaaacca 349
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Db  241 CTCACCAGCCGCGCGGGTGGATCACTGTCGTTCAAGGACAACCTGAACAAACCA 300

Qy  350 tacctgttctctgtgctggggcctggcagctgggggaacctggctctcggtcccag 409
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Qy  410 aaggtggtgttgcctggttggagccccacccctgtgtattcctggaagaggtgcctgt 469
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Qy  470 gcagacattgccctggtcgcgtctcagagcgtcctcagaacgggtctgccc 529
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Db  481 ATCTGCCTACCTGATGCCTCTATCCACCTCCCCAACACACACACTGCTGGATCTCAGGC 540

Qy  590 tggggggagcatccaagataggagttcccttgcccacaccctcagaccctgcagagctgaag 649
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Qy  710 cccatcactgaggaacatgctgtgtccgggctacttggagggggaggggatgtctg 769
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Db  721 GGCGGACTCCGGGGGCCCCTCATGTGCCAGGTGGACGGGGCCTGGCTGCTGGCCGGGCATC 780

Qy  830 atcagctgggtcgagggctgtgtccgagcggcaacatggagggccgggagccgcctcct 889
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Qy  890 gccgccacccgctcgggttggagagatcgtgcaaggggtgcagtccgggcggccctcag 949
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Qy  950 ggggtggggtccctcaagggtcaccagagcccaggtctgggcgcccgccgctcctagggc 1009
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Qy 1010 gcagcgggacgcggggctcagaacggccagaatccaatcctgggatctggaatct 1069
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Qy 1070 gcgggcggcctcggggcgcggttccccgccgcgtaaatagggccatctaccctgggg 1129
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Qy 1309 ttgtaaccctgcccacatatctttattttattcctccaatttcaataaa 1355
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RESULT    4
AB010778
LOCUS       AB010778                 1321 bp    mRNA            linear   ROD 17-MAY-2001
DEFINITION  Mus musculus mBSSP-4 mRNA for brain specific serine protease-4,
            complete cds.
ACCESSION   AB010778
VERSION     AB010778.1  GI:12248748
KEYWORDS    .
SOURCE      Mus musculus
  ORGANISM  Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE   1 (sites)
AUTHORS     Mitsui,S., Okui,A., Kominami,K. and Yamaguchi,N.
TITLE       Cloning and characterization of a novel serine protease, mBSSP-4
JOURNAL     Unpublished
```